

Mass and Related Quantities, Norway, JV (Justervesenet)

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty					Comments	NMI Service Identifier
Class	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?		
Mass	Mass standards	Comparison in air	1	100	mg			0.6 to 1.5	µg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	0.1	1	g			1.5 to 2.1	µg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	1	10	g			2.1 to 9	µg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	10	100	g			9 to 14	µg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	0.1	1	kg			14 to 70	µg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	1	10	kg			0.07 to 1.3	mg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	10	50	kg			1.3 to 22	mg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	50	100	kg			22 to 170	mg	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	
Mass	Mass standards	Comparison in air	100	500	kg			0.17 to 1.1	g	2	95%	No	Uncertainty scales with measurand level. The volume of the mass standards is known.	

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty					Comments	NMI Service Identifier
Class	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?		
Mass flowrate	Flowmeter	Coriolis, pulse or other electrical output	0.1	25	kg/s	Liquid	water	0.20	%	2	95%	Yes		NO1
						Temperature	5 °C to 65 °C							
						Pipe size	DN 10 - 150							
Mass flowrate	Flowmeter	Coriolis, visual reading	0.1	25	kg/s	Liquid	water	0.20	%	2	95%	Yes		NO2
						Temperature	5 °C to 65 °C							
						Pipe size	DN 10 - 150							
Volume flowrate	Flowmeter	Positive displacement, turbine, electromagnetic, ultrasonic, pulse or other electrical output	0.1	25	l/s	Liquid	water	0.22	%	2	95%	Yes		NO3
						Temperature	5 °C to 65 °C							
						Pipe size	DN 10 - 150							
Volume flowrate	Flowmeter	Positive displacement, turbine, electromagnetic, ultrasonic, visual reading	0.1	25	l/s	Liquid	water	0.22	%	2	95%	Yes		NO4
						Temperature	5 °C to 65 °C							
						Pipe size	DN 10 - 150							

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty					Comments	NMI Service Identifier
Class	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?		
Mass	Mass meter	Coriolis	1	5000	kg	Liquid	water	0.10	%	2	95%	Yes		NO5
						Temperature	5 °C to 65 °C							
						Pipe size	DN 10 - 150							
Volume	Volume meter	Positive displacement, turbine, electromagnetic, ultrasonic	1	5000	l	Liquid	water	0.12	%	2	95%	Yes		NO6
						Temperature	5 °C to 65 °C							
						Pipe size	DN 10 - 150							
Volume flowrate	Water flowmeters	Positive displacement, turbine, electromagnetic, ultrasonic	0.01	4	l/s	Liquid	water	0.20	%	2	95%	Yes		NO7
						Temperature	5 °C to 15 °C							
						Pipe size	DN 5 - 50							
Volume	Water meters	Positive displacement, turbine, electromagnetic, ultrasonic	10	500	l	Liquid	water	0.10	%	2	95%	Yes		NO8
						Temperature	5 °C to 15 °C							
						Pipe size	DN 5 - 50							
Volume	Sinker, plummet	Any type of instruments, if mass smaller than 200 g	0.001	0.2	l	Buyancy in water	room temperature	0.01	%	2	95%	Yes		NO09
Volume	Glassware	Pipettes, burettes, pycnometers	0.01	0.1	l	Water content	room temperature	0.05	%	2	95%	Yes		NO10

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty					Comments	NMI Service Identifier
Class	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?		
Volume	Glassware	Any type of instruments	0.1	5	l	Water content	room temperature	0.03	%	2	95%	Yes		NO11
Volume	Proving tank	Any type of instruments	5	500	l	Water content	room temperature	0.006	%	2	95%	Yes		NO12
Volume	Proving tank	Any type of instruments	500	5000	l	Water content	room temperature	0.02	%	2	95%	Yes		NO13